certain than in affections of the gastro-intestinal tube, and is never so great as when diarrhœa, colic, and flatus are present. From whatever cause pain manifests itself during digestion, we may relieve it by mixing the subnitrate freely with the articles of food.

Administration and Action.—It should be given in powder, and best so with the first spoonful of broth or gruel. It excites no disgust, especially if placed between two bits of bread soaked in broth. Children take it readily with milk or ptisans. The author has never given less than from two to three drachms per diem, nor more than twenty, and he has never observed the slightest inconvenience from these large doses; and it is his custom to give it to the children in his hospital by spoonfuls or tablespoonfuls, without observing more exactitude, so innocuous is it. So imperfectly is this fact known, that the chemists hesitate in preparing his prescriptions in which these large doses are ordered. The author cannot conceive why this substance was ever set down as an irritant poison, as he has never found the slightest irritation from the largest doses given to either the healthy or the sick; and post-mortem examination proves that, beyond patches of black discoloration, it produces no effect on the mucous membrane, the consistence of this remaining quite normal. The action of the substance on the canal seems to be quite negative, that is to say, the anormal symptoms for which it was prescribed quickly disappear. Great attention has failed also to detect any marked effect upon any other part of the system. Perhaps the urine is somewhat increased, and the pulse becomes slower; but this is probably due to the relief of the gastro-intestinal affection. The action of bismuth is then purely a *local* one; and this local action, so far from being an irritant one, as so commonly stated, diminishes the activity of the phenomena of which the mucous membrane is the seat. It is not to be supposed, however, that this inert substance can act actively and directly upon the canal, as a soluble body after absorption does; and it is probable that it acts merely as an inert body, just as charcoal might act, mechanically protecting the over-excited secretory organs and papillæ of the nerves from the too immediate contact of the fluids, and especially of aliments. By its mechanical apposition, it limits the amount of exhalation. The allegation of its antispasmodic properties has solely arisen from observing the diminution of the symptoms, without considering whether this might not arise negatively from the preservation of the gastro-intestinal surface from the causes of irritation. In this way, we might call darkness an antispasmodic, because it gives repose to the retina, and tends to subdue the irritation which gives rise to photophobia.—*Brit. and For. Med.-Chirurg. Rev.*, from *Gaz. Méd. de Paris*, Nos. 15 and 16.

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11. *Concealing the Taste of Fish Oil.*—Now that the swallowing cod-liver oil bids fair to become the fashionable mania of the day, it may be as well to state the simple and effectual means communicated by M. Fredericq, of disguising its abominable taste. This merely consists in masticating a morsel of dried orange peel just before and just after swallowing the dose.—*Rev. Med.-Chir.*, tom. v.

[We have employed this means in one case, and with a very satisfactory result. The patient states that the taste of the oil is entirely disguised, by the use of the orange peel.]

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12. *Therapeutic Action of Aconitum Napellus.*—The following is an abridgment of papers, by M. Tessier, on this subject, in the *Gazette Médicale de Lyon*, for 15th and 31st January, 1849:—

Aconite has three modes of action, viz.: a *narcotic*, an *antiphlogistic*, and a *special action on the skin.*

1. Narcotic Action.—Some deny that aconite acts in this way; but, nevertheless, the fact is incontestable. It is sufficient to place some drops of the tincture on the tongue, to be satisfied of the narcotic action on the nervous system; for it excites a very decided feeling of numbness in that organ. Besides, when a full dose is administered, it is no uncommon thing to observe delusions, vertigo, collapse, and delirium—in fact, such effects are known to follow opium and poisons from the family *Solaneæ*. In painful diseases, too, it often gives a wonderful immunity from pain. I have administered Aconite

in a great number of painful diseases—in dull pains in the bones, in facial neuralgia, in toothache, sciatica, cancer, &c.; and have observed effects which, from their diversity, well merit attention. While morphia, with a few very rare exceptions, calms every species of pain, aconite only relieves a certain special class. Thus I have never been able, by means of it, to assuage the pain of exostosis, cancer, myelitis, nephritis, gastralgia, or whitlow; but, on the other hand, I have obtained the best results from its use in such painful affections as have a catarrhal or rheumatismal cause, along with disordered function of the skin, such as rheumatism, angina, toothache, &c. Aconite is, then, in a certain class of cases, a narcotic agent (*agent stupéfiant*), but this action is subordinate to another, afterwards to be spoken of.

2. ANTIPHLOGISTIC ACTION.—The reality of this mode of operation is believed in by Dr. Fleming; by Dr. Giacomini, who places aconite among the hyposthenic arterial remedies; and by the homœopaths, who affirm that this medicine may be used as a substitute for bleeding in the most urgent cases. To solve the question, as to the existence of antiphlogistic properties, it will not do (like Dr. Fleming), to choose cases of rheumatism, bronchitis, pneumonia, erysipelas, or neuralgia, all of which can usually be cured without the abstraction of blood: but we must take diseases in which bleedings are regarded as indispensable, as inflammation of the brain, apoplexy, peritonitis, hypertrophy of the heart, inflammatory fever, and ophthalmia from the introduction of a foreign body into the eye. In my experiments with aconite on the latter class of cases, I have not met with a single instance in which the aconite could usefully be preferred to bleeding. I have also given it in active hemorrhages, in hæmoptysis, and in menorrhagia—and without any advantage. From my observations, aconite does not appear to be more suitable to the plethoric: and upon the whole, I am inclined to think that it answers best with persons of a nervous or lymphatic temperament, and especially with those predisposed to rheumatismal and catarrhal affections. I do not, however, maintain that aconite *never* acts as an antiphlogistic: for by and by I am going to mention cases in which it has sensibly reduced the pulse; but then I will show, at the same time, that the action on the circulation was *indirect*, and that it is by regulating another function that aconite diminishes fever.

3. ACTION ON THE SKIN.—If the principal therapeutic action of aconite be neither narcotic and calmative, nor antiphlogistic, what is it? My reply is, that *the special action of aconite is on the skin.* It possesses the property of eliminating from the vessels of the skin the hurtful matter, and of re-establishing the cutaneous functions when deranged by checked transpiration, or by some virus. I think that it has the special power of controlling diseases arising from cold, and others in which a morbid principle is retained in the cutaneous tissues, as occurs in the exanthematous fevers. It is a suitable medicine in all those diseases in which the function of the skin is disordered, as in articular and muscular rheumatism, as well as in rheumatism of the nerves, including sciatica and odontalgia; also in affections of the mucous membranes, such as bronchitis, etc.; likewise in the exanthemata.

DISEASES IN WHICH ACONITE IS USED.—COURBATURE.—A bruised feeling in the limbs, creeping sensations on the surface, lassitude, headache, and general discomfort, constitute the group of symptoms called by this name: and they are also symptoms which specially indicate the use of aconite. The desired relief will generally follow, by taking daily from five to ten drops of the alcoholic tincture, in a little water, or bland vegetable infusion.

CATARRHAL FEVER, as Hufeland showed, is caused by the suspension of the active functions of the skin. Its physical characters are: alternations of heat and cold, dragging pains in the limbs, increased frequency in the desire to make water, a tendency to sweat, general fever complicated with a local affection, which is generally coryza, angina, or bronchitis. The therapeutic indications are: 1st, To re-establish the functions of the skin; 2d, To subdue the irritation of the nose, throat, and bronchial tubes. Aconite fulfils all these intentions. In catarrhal fever, as in *courbature*, it causes the pain in the limbs, the shiverings, and the heats to subside, and, at the same time, greatly simplifies the progress of the affection of the mucous membrane. But aconite does not, unaided, fulfil the second intention, which requires the assistance of opiates, blisters, or such other means as may be suitable.

ANGINA AND ACUTE BRONCHITIS.—Like MM. Tessier, of Paris, and Gabalda, the author has seen aconite of much service in these affections, by diminishing, in the former, the pains of deglutition, and in the latter, rendering the fits of coughing much less distressing.

RHEUMATISM.—To have a correct appreciation of the action of aconite in rheumatism, it is necessary to discriminate between the different forms of rheumatism, for it is very far from possessing the same influence over all of them. The cases in which it succeeds best are—recent rheumatic pains, unaccompanied by swelling and fever, or in which these symptoms are slight. In them, it possesses very great efficacy, and is preferable to bleeding; also to inoculation with morphia, or the use of belladonna—which drugs are mere palliatives of pain. In acute articular rheumatism, accompanied by decided swelling of the joints and ardent fever, aconite is of less value. At the onset, however, of such attacks, it may be administered with advantage, for the purpose of diminishing the afflux of blood [*la fluxion*] to the joints; but when the synovial membrane and the fibrous and ligamentous structures of the joints become inflamed, aconite is useless, and, in my opinion, the best treatment is by large doses of nitrate of potash. In chronic apyrexial rheumatism, the results are good, though not so striking as in recent attacks. By persevering in the use of aconite for six weeks or two months, obstinate rheumatic pains, which have existed for years, may be subdued. Aconite, besides being remedial, possesses preventive properties, by its decided influence over the rheumatic diathesis. When given with this view, it must be continued for months. In all rheumatic affections, but especially those which are chronic, the doses must be much larger than those which are suitable in the diseases formerly spoken of. It is necessary to begin with ten or twenty drops of the alcoholic tincture, and to increase the quantity up to four, six, or eight grammes.*

ERUPTIVE FEVERS.—In these affections, as in catarrhal fever, the pulse is brought down: the eruption is also made to come out better. The beneficial influence of aconite on the progress of the exanthemata has already been mentioned, in a work published at Lyons—*La Pharmacopée de Vitet.* It does not appear whether the discovery of this property of the medicine belongs to Vitet, or whether it was stated by him at second hand.

ERYSIPELAS.—M. Tessier agrees with Drs. Fleming and Gabalda in believing that aconite diminishes the duration and the danger of this disease. I would wish to call the attention of surgeons to its value in erysipelas attacking wounds; so that my observations may be verified. I have several times seen a prompt and remarkable amendment follow the daily use of from ten to twenty drops of the tincture, in cases of erysipelas spreading around wounds and ulcers, and accompanied by severe constitutional symptoms.

PNEUMONIA.—M. Tessier agrees with Dr. Fleming that the aconite, when administered at the commencement, tends to restore the suppressed transpiration from the skin, and may thus give a milder character to the disease: but if inflammation have actively set in—if auscultation reveal engorgement and condensation—we must not anticipate resolution from the exhibition of aconite.

MODE OF ADMINISTRATION.—I am truly astonished at Dr. Fleming recommending the largest doses to be used when an antiphlogistic, rather than an anodyne or narcotic, effect is desired. However much I respect so distinguished an authority, I must state that my practice is entirely different. In a case of rheumatism, neuralgia, or any other affection in which I wish the calmative properties of the medicine, I give from ten to twenty drops of the tincture, and gradually augment the dose to three, four, five, or even to eight grammes in the day; but, on the contrary, when I give it in the *courbature* or catarrhal fever, I order only from five to ten drops in the twenty-four hours, and by such doses I bring down the pulse, and diminish all the other febrile symptoms, without inducing any symptoms of poisoning. I prefer the tincture, as more certain than the extract. The tincture, diluted with one or two parts of water, may be applied topically in neuralgia; but used in this way, aconite is an uncertain remedy.—*London Journ. Med.*, June, 1849.

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* Let us caution our readers not to use the tinctures in common use in this country in such doses. No physician ought to prescribe aconite, without minutely specifying the preparation he intends to be used. That which we prefer is Dr. Fleming's *Tincture of the root*, which is transparent, in colour like sherry wine, and of a slightly bitter taste. The following is the formula: "Take of root of A. Napellus, carefully dried and finely powdered, sixteen ounces troy; rectified spirit, sixteen fluid ounces; macerate for four days; then pack into a percolator; add rectified spirit until twenty ounces of tincture are obtained." Dose, from three to five minims in repeated doses.

MEDICAL PATHOLOGY AND THERAPEUTICS, AND PRACTICAL MEDICINE.

13. *The Microscopic Constituents of Tubercular Deposits.*—Different observers of tubercles have variously stated, (1,) that it contains peculiar "tubercle cells or bodies;" (2,) that it does not contain any definite microscopic constituents; or, (3,) that the crude or miliary variety contains an organic body of definite form.

Albers, of Bonn, in Schmid's "*Jahrbücher,*" No. 2, 1849, confirms the latter of the three opinions. This peculiar body occurs very seldom in miliary tubercles, but more frequently in the infiltrated form. Its size is very variable; its form irregularly roundish; its outer surface is mostly covered with fine amorphous granules; no nucleus exists in its interior, or anything whatever answering to it. This body is the first step to organization, viz., that in which plastic fibrin takes the form of a deformed mass previous to the construction of a cell. But its form is too irregular to afford the presumption of a definite nature; it is merely an aggregation of matter present in crude transparent tubercle, and sometimes called "Enchym-Korper," or pregnant mass. It exists only in the first stage of tubercle, and, in all probability, never undergoes a development into a nucleus, far less into a cell: in the second stage, it disappears by separating into amorphous granules. In this way, the softening of tubercle commences. The amorphous granules increase in number; the "pregnant masses" become smaller and more thickly covered with these granules; and, finally, by the time the tubercle has attained the consistence of pap, they have altogether disappeared; while pus corpuscles are found in their place. The latter appear with the commencement of softening, and increase in number to its termination.

The author states, that these "pregnant masses" are not always present, and that this absence is an indication of a very low capacity for organization. And so their predominance in miliary tubercle indicates the higher capability of this variety—a fact which its more frequent cicatrization corroborates. He regards the suppuration in a tubercular cavity as an effort of nature towards reparation; indeed, he strangely regards it as compensative of the lost tissue; and the pus-secreting membrane he calls a "Regenerations Haut"—membrane of regeneration.

Thus, on the whole, Albers would make out tubercle as even less organized, *i.e.*, containing fewer cell forms, than Rokitansky, Vögel, and other observers. And in any case, whether the few nuclei observed be mere mixture or no, one may notice how little the granular mass deserves the *functional* name of blastema, so erroneously applied to it. The author's "first step to organization" might almost be called "coagulation," since there is nothing here which may not be fairly referred to this well-known process. Finally, the notion of pus being an attempt at "regeneration," is one of those over-strained analogies which could only be imagined after forgetting what regeneration is; or, in other words, an organized body which *never* produces a tissue can scarcely be considered compensative of one.—*Med. Times*, May 5, 1849.

14. *Preparations illustrative of the Course of Tubercle in the Lungs.*—Dr. Bennett exhibited to the Medico-Chirurgical Society of Edinburgh, May 16th,